

REMARKS

Claims 1-8 are pending, with claim 1 being independent. Claim 3 has been amended to change “divider” to “frequency divider.” Support for this amendment may be found, for example, on page 8, lines 10-12 of the specification.

The Office Action dated October 29, 2007 rejected claims 1-5 and 8 under 35 U.S.C. § 103(a) as being unpatentable over Volk, U.S. Patent No. 5,384,502, in view of Everitt et al., U.S. Patent No. 6,188,739. Applicant respectfully submits that these references do not meet the elements of at least claim 1.

Claim 1 recites:

A method for generating an output signal locked to an input signal, the method comprising:
receiving at a detector the input signal and a reference signal;
generating a detector output signal indicative of a difference between the input signal and the reference signal;
receiving the detector output signal at a first filter coupled to the detector and providing a filtered detector output signal;
receiving the filtered detector output signal at a transconductance (gm) amplifier coupled to the first filter and providing a current output signal;
receiving the current output signal at a second filter coupled to the gm amplifier and providing a control signal; and
receiving at an oscillator coupled to the second filter the control signal and providing an oscillator signal having a property that is adjusted by the control signal.

(emphasis added).

The Office Action asserts that Figure 3 of Volk discloses “receiving the detector output signal at a first filter coupled to the detector,” as recited in claim 1. Applicant respectfully disagrees. The split loop filter 63 of Volk is coupled to the charge pump 62, and not to a detector, as recited in claim 1. Accordingly, the split loop filter 63 of Volk also does not “receive the detector output signal.” While the Office Action asserts that Volk discloses “filter[ing] the phase detected output signal through a charge pump,” this assertion, even if considered valid for the sake of this response, does not meet the element of claim 1—claim 1 recites “receiving the detector output signal at a first filter coupled to the detector,” not “through a charge pump.” Therefore, at least this element of claim 1 has not been shown or rendered obvious by the references, and, accordingly, Applicant respectfully requests that the rejection of claim 1 be withdrawn.

The Office Action further asserts that Figure 4 of Everitt discloses “a second integrator (second filter) 450 coupled between a charge pump (sometime also called trans-conductance (gm) amplifier) and a signal controlled oscillator (VCO) 416.” In contrast, claim 1 recites, “receiving the current output signal at a second filter coupled to the gm amplifier and providing a control signal.” Consequently, because the second integrator 450 of Everitt does not disclose a “second filter,” as recited in claim 1, Applicant submits that Everitt does not disclose or render obvious the second integrator 450 acting as a filter in the manner recited in claim 1. Therefore, no combination of Volk and Everitt discloses or renders obvious at least the referenced elements of claim 1, and Applicant respectfully requests that the rejection of claim 1 be withdrawn.

Applicant further requests that the rejections of claims 2-5 and 8 be withdrawn due at least to their dependence on allowable claim 1. Applicant requests that the rejection of claim 3 be withdrawn for at least the further reason that Volk does not disclose or render obvious a “frequency divider,” as recited by amended claim 3: Figure 3 of Volk discloses an element referred to therein as a digital divider 67, but not a frequency divider.

The Office Action rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Volk in view of Everitt, and further in view of Voorman, U.S. Patent No. 4,780,690. Applicant respectfully submits that Voorman does not compensate for the deficiencies of Volk and Everitt in failing to disclose or render obvious all of the elements of claim 1. Accordingly, Applicant respectfully requests that the rejection of claim 6 be withdrawn due to its dependence on allowable claim 1.

The Office Action rejected claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Volk in view of Everitt, and further in view of Hotine, U.S. Patent No. 4,656,647. Applicant respectfully submits that Hotine does not compensate for the deficiencies of Volk and Everitt in failing to disclose or render obvious all of the elements of claim 1. Accordingly, Applicant respectfully requests that the rejection of claim 7 be withdrawn due to its dependence on allowable claim 1.

Conclusion

Applicant believes that all pending claims are in condition for allowance and respectfully requests notification to that effect. The Examiner may telephone Applicant's attorney (208-286-1013) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-3521.

Respectfully submitted,

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